

CHM 338: Bio NMR and MRI Syllabus – Fall 2007

Instructor: Cristina Suarez
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Office Hours: M 3:30-4:30 pm
R 9:00-10:00 am

Lectures: M, W and F 1:10PM -2:30PM in Sabin-Reed 342

Textbook: Basic One- and Two-Dimensional NMR Spectroscopy (Paperback) by Horst Friebolin
Wiley-VCH; 4th Rev Upd edition (March 11, 2005)

Recommended books: (Science library)

A Complete Introduction to Modern NMR Spectroscopy by R. Macomber (1998)

Modern NMR Spectroscopy: A Guide for Chemists by J. Sanders and B.K. Hunter (1997)

Protein NMR Spectroscopy: Principles and Practice by J. Cavanagh, et al. (1995).

*Please, if you see that an NMR book you are looking for is already checked out, consult with me first before you recall it. I might be the one borrowing it!

Course Content: This course is designed to provide an understanding of the general principles governing 1D and 2D Nuclear Magnetic Resonance (NMR) spectroscopy. Examples from the diverse use of biological NMR in the study of protein structures, enzyme mechanisms, DNA, RNA, etc. will be analyzed and discussed. A basic introduction to Magnetic Resonance Imaging (MRI) will also be included, concentrating on its application to biomedical issues. Prerequisite: A knowledge of NMR spectroscopy at the basic level covered in CHM222 and 223.

Graded Assignments:

This course has no formal exams, but you will be given a series of assignments during the semester (article reviews, lecture summaries, online work, data collection, etc) that you must turn in for credit and/or grade. You will also be asked to do two formal class presentations, one in a group and a second one on your own. Your level of participation in the course will be assessed and credited accordingly. Participation includes preparation before class, contribution during class and promptly completion of assignments. Completion of all assignments is required to pass the course.

Grading:

Grades will be determined based on 800 points distributed as follows:

Papers 300
Assignments 200
Presentation 200
Participation 100